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Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes

Note by the Secretariat

Pursuant to Human Rights Council resolution 27/23, the Special Rapporteur has prepared guidelines for good practices in relation to the human rights obligations related to the environmentally sound management and disposal of hazardous substances and wastes. The guidelines are intended to help States, businesses, civil society, trade unions and other key actors identify and address key problems that give rise to human rights abuses due to toxics. The guidelines are not intended to be a comprehensive compilation of practices by State and non-State actors, given the dynamism of approaches to the issue and the limitations of space in the report.

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I. Introduction

1. A long-standing request of the Human Rights Council, predating the current Special Rapporteur, is a report on good practices in relation to the human rights obligations related to the environmentally sound management and disposal of hazardous substances and wastes (hereinafter, such substances and wastes are also referred to as "toxics"[1]).

2. The Special Rapporteur wishes to point out that, due to legal developments, political shifts and progress in science, practices in the context of toxics evolve constantly. Accordingly, the present report is not intended to be an exhaustive compilation of good practices. Rather, the Special Rapporteur presents guidelines that can inform good practices of States and businesses in relation to toxics. The report builds on a number of expert consultations held by the Special Rapporteur in 2015 and 2016. The Special Rapporteur has also addressed a questionnaire to States and non-State entities, including businesses and civil society representatives, which remains available online in English, French and Spanish.[2] The Special Rapporteur is grateful for the submissions received (30 in total).

3. Due to space limitations and the volume of input received, the Special Rapporteur does not make reference in the present report to any specific input. He continues to encourage States and all other interested stakeholders to submit their input. Replies to the questionnaires will be accepted on an ongoing basis and will inform an online repository to facilitate knowledge-sharing and exchange.

II. Duties of States

A. Respect, protect and fulfil

4. States have an obligation to respect, protect and fulfil recognized rights implicated by the production, use, release, storage and disposal of hazardous substances and wastes. As such, States must:

(a) Refrain from unjustifiable interference with the enjoyment of the rights implicated by toxics;

(b) Protect against abuses by non-State actors, particularly businesses, which requires States to enact and enforce necessary laws and policies on toxics;

(c) Give sufficient recognition of the human rights implications of toxics in laws and policies, and take positive action to facilitate the realization of human rights implicated by toxics, including through budgetary allocations.

5. Furthermore, States must recognize their obligations to respect, protect and fulfil human rights extraterritorially. In fulfilling their obligations, States must refrain from discrimination and ensure substantive equality.[3]

6. Numerous civil, political, economic, social and cultural rights are implicated by toxics. Those rights are interlinked, interdependent and indivisible. As such, in the present section, the Special Rapporteur does not refer to all the rights implicated. For example, while the rights to food, to water and to adequate housing are not discussed specifically,

[1] Consistent with the previous reports of the Special Rapporteur and his predecessors, hazardous substances and wastes are not strictly defined; they include, inter alia, toxic industrial chemicals and pesticides, pollution, contamination, explosive and radioactive substances, certain food additives and various forms of waste. For ease of reference the Special Rapporteur refers to hazardous substances and wastes as "toxics", but the term as used in the report includes non-toxic but hazardous substances and wastes as well.

[2] See www.ohchr.org/EN/Issues/Environment/ToxicWastes/Pages/Environmentallysoundmanagementdisposal.aspx.

[3] Modified from a framework proposed by the Special Rapporteur on the human right to safe drinking water and sanitation (A/HRC/27/55).

they should be borne in mind, as appropriate, in the context of all considerations discussed in the present report.

Life

7. States must prevent arbitrary deprivation of life resulting from toxics. In line with the concept of "inherent right to life", States are required to adopt positive measures to protect that right,[4] including effective measures to prevent and safeguard against hazards that threaten the lives of human beings.[5] States must take all possible measures to reduce infant mortality and to increase life expectancy, especially in adopting measures to eliminate malnutrition and epidemics.[6]

8. Pollution is estimated to be one of the leading causes of death and disease worldwide.[7] Exposure to pollution and toxic chemicals is dramatically contributing to infant mortality and reduced life expectancy. The World Health Organization (WHO) estimates that in 2012, the deaths of 12.6 million people (nearly one in four of the total deaths) were attributable to an unhealthy environment, including exposure to toxic and otherwise hazardous substances.[8] Of those deaths, 8.2 million were attributable to non-communicable diseases linked to exposure to toxics. However, owing to information gaps, the figure represents an underestimation; the adverse impacts of only a few substances are accounted for, in a universe of thousands of hazardous substances released by human activities.

Health

9. Everyone has the right to the highest attainable standard of physical and mental health,[9] and thus to be protected from toxic chemicals, pollution and contamination. States, in their obligation to protect the right to health, must prevent and reduce the population's exposure to hazardous substances and wastes that have a direct or indirect impact on human health.[10] States must elevate standards of protection as "expeditiously and effectively as possible"[11] to protect the right to health.

10. The right to health, and the corresponding obligation of States to protect against toxic exposure, is inextricably linked to the rights to safe food, safe water and adequate housing. To this end, in accordance with article 24 of the Convention on the Rights of the Child, on the child's right to the enjoyment of the right to health, States are explicitly required to ensure the provision of adequate nutritious food and clean drinking water, taking into consideration the dangers and risks of pollution and contamination.

11. Exposure to toxic pollution through air, water and food is contributing to an ongoing and increasing global public health crisis of non-communicable diseases. Rates of cancer, chronic respiratory illness, stroke, and heart and other non-communicable diseases have dramatically increased in recent decades. In addition, toxic exposures are linked to birth defects and various mental health impacts, such as reduced intelligence. Increased rates of

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[4] See Human Rights Committee, general comment No. 6 (1982) on the right to life, para. 5.

[5] See E/CN.4/Sub.2/1994/9 and Corr.1, para. 175.

[6] See Human Rights Committee, general comment No. 6, para. 5. While the Committee states that it would be "desirable" for States to take all possible measures, the evidence is now much stronger that States must take all possible measures to respect, protect and fulfil.

[7] See www.commissiononpollution.org/about.

[8] See www.who.int/mediacentre/news/releases/2016/deaths-attributable-to-unhealthy-environments/en/.

[9] See Universal Declaration of Human Rights, art. 25 (1); Constitution of the World Health Organization; International Covenant on Economic, Social and Cultural Rights, art. 12; Convention on the Rights of the Child, art. 24 (see also art. 17).

[10] See Committee on Economic, Social and Cultural Rights, general comment No. 14 (2000) on the right to the highest attainable standard of health, para. 15.

[11] Committee on Economic, Social and Cultural Rights, general comment No. 3 (1990) on the nature of States parties' obligations.

disease and disability clearly point to environmental contributions.[12] Reductions in exposure are demonstrated to lead to improved health outcomes.[13]

Physical and mental integrity

12. In order to uphold the right to physical and mental integrity, States are required to take positive measures to protect everyone from exposure to hazardous substances. This right encapsulates the right of all human beings, including children, to autonomy and self-determination over their own body; a non-consensual intrusion upon the physical or mental integrity of the person could be considered a human rights violation.

13. This right is well established under international human rights law, including all regional human rights instruments,[14] although underrecognized in the context of toxics. For example, States must protect children from all forms of physical or mental violence, injury or abuse, and neglect or negligent treatment.[15] Exposure to hazardous substances can be a violent act. In accordance with the Convention on the Rights of the Child (art. 37), the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (art. 2) and the International Covenant on Civil and Political Rights (art. 7), States are required to protect against torture or other cruel, inhuman or degrading treatment or punishment.[16]

14. While the right to physical and mental integrity has traditionally been raised in connection with incarceration, interrogation and medical experimentation, this right is implicated by exposure of humans to toxics. Although cases of acute poisoning and high levels of intoxication present an unquestionable violation of the right to physical integrity, the right also extends to protection against chronic, low-level exposure to toxic substances.[17] Today, children are born "pre-polluted" by dozens, if not hundreds, of toxic chemicals.[18] Every day, everyone is chronically exposed to a multitude of hazardous substances in food, water and air, without their consent. In some areas, typically lower-income communities, exposure rates are extreme.

Non-discrimination

15. States must never discriminate on the basis of income, age, race, colour, ethnicity, gender, religion, origin, disability, or other status. Equality and non-discrimination is fundamental to human rights law.[19] All individuals are equal as human beings and, by virtue of this and the inherent dignity of each person, must have equal protection from toxics.

16. The adverse impacts of toxics on the poor, the young, older persons, minorities, indigenous peoples and other vulnerable groups are unequal, and the different genders are affected in different ways (see section II.B below). In addition to double standards of protection within countries, there are double standards of protection between countries, particularly between developing and industrialized countries, which are often exploited by businesses with global supply and value chains. The transfer of toxic production and disposal processes to the marginalized or the less fortunate is of grave concern.

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[12] See, for example, www.epa.gov/ace.

[13] See, for example, A/HRC/33/41, para. 66 (citing S.D. Grosse and others).

[14] See, for example, the American Convention on Human Rights, art. 5 (1); the Charter of Fundamental Rights of the European Union, art. 3; and the African Charter on Human and Peoples' Rights, art. 4.

[15] Convention on the Rights of the Child, art. 19. See also Committee on the Rights of the Child, general comment No. 4 (2003) on adolescent health and development in the context of the Convention, para. 8.

[16] See also Human Rights Committee, general comment No. 20 (1992) on the prohibition of torture or other cruel, inhuman or degrading treatment or punishment, paras. 2 and 5.

[17] See A/HRC/33/41, para. 34.

[18] Ibid., para. 5.

[19] See, for example, Universal Declaration of Human Rights, art. 2.

Accountability, justice and remedy

17. Accountability is a fundamental principle of human rights. States and other duty bearers must be answerable to rights holders for the observance of human rights implicated by toxics. In this regard, duty bearers must comply with the legal norms and standards enshrined in international human rights instruments. Every rights holder is entitled to initiate proceedings for appropriate redress before a competent court or other adjudicator in accordance with the rules and procedures provided by law. States must ensure access to justice and provide effective remedies and restitution to victims of those violations occurring as a result of exposure to hazardous chemicals.[20]

18. Most victims of toxics have no access to justice and no semblance of an effective remedy, and most perpetrators of violations relating to toxics are not held accountable. The burden of proving the cause of their illness, the lack of information, the insurmountable costs of judicial remedy, corporate structures, global and devolved supply chains and other factors all obstruct the path to justice and remedy for most victims (see section IV below).

Information

19. To protect human rights affected by toxics, States are duty-bound to generate, collect, assess and update information; effectively communicate such information, particularly to those disproportionately at risk of adverse impacts; ensure confidentiality claims are legitimate; and engage in international cooperation to ensure that foreign Governments have the information necessary to protect the rights of people in their territory.[21]

20. The enjoyment of the right to information is critical in the context of toxics. Information on toxics is essential in order to prevent adverse impacts, to ensure the realization of freedom of expression and to enable individuals and communities to participate in decision-making processes and to seek and obtain remedy. Health and safety information about toxic chemicals must never be confidential.[22] Information must be available, accessible, functional and consistent with the principle of non-discrimination in order for human rights to be respected, protected, enjoyed and fulfilled.[23] Despite notable improvements in many countries over recent decades, the right to information remains insufficiently realized in the area of hazardous substances and wastes, particularly with respect to protecting the most vulnerable from adverse impacts of exposure, whether from consumer products, at the workplace or via food, water, air or other sources.[24]

Participation

21. States have an obligation to realize the right to meaningful participation.[25] Governments must facilitate the right to participation in environmental decision-making regarding toxics.[26]

22. Every citizen has the right and should have the opportunity to take part in the conduct of public affairs, including in relation to toxics, directly or through freely chosen representatives. The critical importance of public participation in the management of toxics is also recognized in international environmental agreements.[27]

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[20] See E/CN.4/2006/42, para. 45.

[21] See A/HRC/30/40, para. 99.

[22] See the Stockholm Convention on Persistent Organic Pollutants, the Minamata Convention on Mercury and the Dubai Declaration on International Chemicals Management.

[23] See A/HRC/30/40.

[24] Ibid.

[25] Universal Declaration of Human Rights, art. 21; International Covenant on Civil and Political Rights, art. 25. The Declaration on the Right to Development, which has significantly broadened the meaning of participation, emphasizes in its article 2 (3) that participation is to be active, free and meaningful.

[26] A/HRC/7/21.

[27] See, for example, Rio Declaration on Environment and Development, principle 10; Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters; and Dubai Declaration on International Chemicals Management.

23. Although certain States have taken measures to increase public participation in decision-making on the issues of toxics, levels of social unrest driven by concerns about air pollution, water and food contamination and toxic consumer products suggest further improvements are necessary in many States. Concerned communities have complained that their views are not taken into account, that information, particularly on health impacts, is unavailable, inaccurate or too technical, and that processes are not reasonably accessible.

B. Protect the most vulnerable

24. A human rights-based approach to hazardous substances and wastes, including pollutants, toxic industrial chemicals and pesticides, requires a specific focus on the protection of those most vulnerable or at risk: children, the poor, workers, persons with disabilities, older persons, indigenous peoples, migrants and minorities, while taking into account gender-specific risks. Designing laws and policies to protect those most at risk has been shown to have a ripple effect for the broader community. States must ensure that laws, policies and institutions aimed at assessing and mitigating the potential impacts of toxics are based on the needs of the most vulnerable.

Low-income communities

25. Everywhere, the poor bear the brunt of inaction on toxic pollution and other threats from toxics. In all countries pollution disproportionately kills the poor, with over 90 per cent of the disease burden from pollution falling on residents of low- and middle-income countries.[28] This is in large part due to the international transfer of polluting industries through globalized supply chains, from chemical and steel manufacturing and the extraction of oil, gas, metals and minerals to the exponential increase in pesticide use and the "recycling", incineration and disposal of waste, such as electronics, plastics, batteries and end-of-life ships.[29]

26. Growing evidence shows that in countries of all levels of income, polluting industries are disproportionately located in poor communities. People in poverty are more likely to reside near toxic contamination and sources of pollution and to consume toxic products. Poorer communities are also less likely to be successful in defending their rights against businesses, facing an absence of information, power asymmetries, difficulties in securing legal representation and complicating variables that make correlations between exposure and impact more difficult. Malnutrition among low-income communities can also exacerbate the health impacts of exposure to hazardous substances. Many of the groups described below are found in low-income communities, which further elevates their risk.

27. Internationally, low- and middle-income countries are at grave risk owing to the transfer of polluting industries and toxic products from wealthier countries. Many factors have led to this situation, including a deficiency in global standards and strong pressure driven by private interests. Businesses with global supply and value chains continue to be implicated in human rights abuses related to toxics in low- and middle-income countries.

Children

28. WHO estimates that 1.7 million children under the age of 5 die each year as a result of toxic exposure and other aspects of an unhealthy environment.[30] Children everywhere, from all backgrounds and incomes, are exposed to dozens if not hundreds of toxic substances during critical periods of development, including while in the womb and through breast milk. Children in low-income and minority communities are exposed at

[28] See www.commissiononpollution.org/about.

[29] See, for example, Qiang Zhang and others, "Transboundary health impacts of transported global air pollution and international trade", *Nature*, vol. 543 (March 2017). Available at www.nature.com/nature/journal/v543/n7647/full/nature21712.html.

[30] See www.who.int/mediacentre/news/releases/2017/pollution-child-death/en/.

significantly higher levels. Today, paediatricians refer to the impacts of toxic chemicals and pollution on children as a "silent pandemic".[31]

29. The timing of exposure is a critical factor in whether exposure to toxic chemicals may result in adverse impacts on the right to life or health. Children are not little adults. They have far greater sensitivity than adults at both high and low levels of exposure. Children also generally have higher levels of exposure than adults to toxic chemicals in their environment. Adverse health impacts can be irreversible and can even be passed down from one generation to the next.[32] Risk assessments and subsequent mitigation measures by regulators must adequately account for the elevated risk of adverse impacts in young children exposed to hazardous substances.

30. The incidence of childhood cancer has risen during periods of rapid increase in the use of industrial chemicals; the higher incidence cannot be explained by genetics or lifestyle choices alone.[33] Moreover, the incidence of testicular, breast and other cancers that may be triggered by childhood exposure to toxics has also increased in recent decades. Six hundred thousand children develop irreversible intellectual disabilities every year from lead poisoning alone.[34] Beyond lead, an untold number of neurotoxicants are believed to be eroding intelligence and contributing to developmental abnormalities and behavioural disorders. Type 2 diabetes, previously seen only in adults, is occurring increasingly frequently in children; chemicals linked to obesity are believed to be a contributing factor.[35] Diabetes is predicted to be the seventh leading cause of death by 2030.[36] Asthma is one of the most common chronic diseases among children, with rates rising by 50 per cent every decade on average.[37]

31. States must prevent childhood exposure to toxic substances and pollution.[38] This obligation flows naturally from children's right to physical integrity and from the fact that such exposure makes it nearly impossible to realize every child's right to the highest attainable standard of health, to survival and to maximum development, given their extreme sensitivity to pre- and postnatal exposure. A child's best interests should guide the interpretation and implementation of the Convention on the Rights of the Child. Those interests are best served through the prevention of exposure. Children have the right to demand that the State take their best interests into account in all actions relating to toxics. The inability to ensure that a child's views are heard prior to exposure to hazardous substances and the impossibility of realizing a truly effective remedy after exposure reinforce the duty of States to prevent exposure.

Workers

32. In 2013, the International Labour Organization (ILO) estimated that nearly 2 million workers per year — between 3 and 4 workers per minute — die prematurely from occupational diseases linked to toxic chemicals.[39]

33. Laws in most countries permit workers to be exposed to levels of toxic chemicals hundreds of times higher than the exposure allowed among the general public and often do not take into account real-world exposure scenarios or gender-specific and other sensitivities. Workers are frequently unable to exercise their right to freedom of association and collective bargaining, which is necessary to secure a healthy workplace.

34. Workers should have the right to remove themselves from conditions they believe are unsafe, and the right to information regarding occupational health and safety. However,

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[31] See A/HRC/33/41, para. 4 (citing Philippe Grandjean and Philip J. Landrigan).
[32] Ibid., para. 2.
[33] Ibid., para. 9 (citing the National Cancer Institute of the United States of America).
[34] Ibid., para. 9 (citing WHO).
[35] See www.psr.org/assets/pdfs/obesity-chemical-causes.pdf and http://content.healthaffairs.org/content/30/5/842.full.
[36] WHO, "Diabetes", fact sheet No. 312 (2016).
[37] WHO, "Bronchial asthma", fact sheet No. 206 (2015).
[38] A/HRC/33/41.
[39] ILO, *The Prevention of Occupational Diseases* (2013).

necessary information on safety precautions or health risks linked to toxic chemicals is often unavailable or inaccessible to workers. Information may be in a foreign language, and labelled pictures may be indecipherable or too small to be legible. States continue to allow the use of industrial chemicals and pesticides under the presumption that personal protective equipment will be used, and that it will be used as effectively as expected. However, workers often do not have access to necessary protective equipment of reasonable quality, and the conditions under which they are expected to use the equipment are often completely unreasonable; thus, risk assessments are inaccurate. Workers are exposed to substances whose health effects have not been studied adequately. Adverse health impacts from chronic occupational exposure to toxic chemicals may not manifest as a disease for several years. Due to these and other factors, only a small percentage of workers have access to an effective remedy for violations of their rights.

35. Child labourers, female workers, migrant workers and residents of low-income communities are significantly more vulnerable to toxic impacts due to unique sensitivities, cumulative impacts or unequal protections under the law. One of the worst forms of child labour is that in which children work with, or are exposed to any level of, hazardous substances. WHO has published studies showing that children who work with hazardous substances have shorter average lifespans. Children are also at risk through the transmission of their parents' occupational exposures, in particular from their mother while they are in the womb or through breast milk.

36. States must ensure that workers are able to enjoy the right to safe and healthy working conditions.[40] States must protect the right of workers to just, decent and favourable conditions of work by preventing occupational exposure to toxic chemicals, a right that is indivisible from the right to the highest attainable level of physical and mental health and the right to physical integrity.[41] States must ensure that workers have access to information and effective remedy for violations; they must also ensure that migrant workers enjoy the same rights as nationals of the State of employment regarding protection from toxic exposure.[42]

Gender

37. Biological differences between men and women, such as physiological and hormonal differences, create differing susceptibilities to the effects of exposure to toxic chemicals.[43] Women, for example, are more likely to store higher levels of environmental pollutants in their tissues than those found in men. During pregnancy, lactation and menopause, women's bodies undergo changes that may increase their susceptibility to health impacts from toxic exposure. Furthermore, due to differences in social roles, including occupational and household roles, women and men are exposed differently to toxic chemicals with respect to, among other things, the substances encountered and the degree of exposure.

38. Studies show that women's exposure to pesticides can cause miscarriages, premature births, birth defects and low birth weight. Other studies show strong correlations between cancer and various toxic chemicals used in certain cosmetic products and also found in the environment. Studies show that sperm counts and testosterone levels have fallen dramatically among men in industrialized countries since the 1940s, and such decreases have been linked to toxic chemicals.

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[40] International Covenant on Economic, Social and Cultural Rights, art. 7 (b).

[41] Ibid., art. 12 (2) (b) and (c). The Committee on Economic, Social and Cultural Rights has interpreted the right to health, as defined in article 12 of the Covenant, as extending to underlying determinants of health, including healthy occupational and environmental conditions. See the Committee's general comment No. 14, para. 11; see also the Committee's general comment No. 18 (2005) on the right to work, para. 7.

[42] International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, art. 25.

[43] United Nations Development Programme, *Chemicals and Gender*, Gender Mainstreaming Guidance Series (2011).

Older persons

39. Older persons are at elevated risk of disease resulting from exposure to toxic substances in, among other things, air pollution and following chemical disasters, due to physiological and psychological changes. According to recent figures from WHO, each year 4.9 million adults between the ages of 50 and 75 die prematurely as a result of exposure to an unhealthy environment.[44]

40. The gradual decline in physiological processes, the cumulative effect of lifestyle, occupational and dietary choices and the increase in age-associated diseases and conditions do not only increase the susceptibility of older persons to health problems caused by exposure to hazardous substances, such as air pollutants. These factors also complicate correlation between hazardous exposure and health effects. Furthermore, cognitive impairments can reduce the ability of older persons to recognize, interpret and react to hazardous substances in their environment. Victims may be less likely to pursue legal remedies because of the lengthy process, the efforts required or the complications in establishing correlation. Differences based on race, gender or ethnicity can introduce additional variables. Risk assessments by State regulators often do not adequately account for the elevated risk of adverse impacts among older persons.

Indigenous peoples

41. Indigenous peoples continue to suffer grave rights abuses in connection with the contamination of their lands and territories with pollution from extractive industries, toxic chemicals that migrate long distances via wind and water, and the dumping or leaching of hazardous wastes. High levels of toxic chemicals and pollutants often accumulate in traditional foods of indigenous peoples. Rates of cancer and other adverse health effects have been significantly higher for indigenous communities that must eat, drink and breathe toxic contamination, which in many cases did not originate in their lands or territories. The exact magnitude of the impacts is unknown due to serious deficiencies in health monitoring in many communities. In numerous cases, indigenous peoples have been unable to secure an effective remedy.

42. Indigenous peoples have the right to the conservation and protection of the environment and productive capacity of their lands or territories and resources.[45] This includes the protection of their food, water, air and soil from toxic pollution and contamination. To this end, under article 29 (2) of the United Nations Declaration on the Rights of Indigenous Peoples, States are explicitly required to obtain the free, prior and informed consent of indigenous peoples regarding the storage or disposal of hazardous materials on their lands or territories. Indigenous peoples have the right to demand of States effective measures to ensure that programmes for monitoring, maintaining and restoring health are designed and implemented by those affected by such materials.[46] The Declaration (art. 18) specifically articulates the right of indigenous peoples to participate in decision-making in matters that would affect their rights, through representatives chosen by themselves in accordance with their own procedures, as well as to maintain and develop their own indigenous decision-making institutions.

Minorities

43. Racial, religious and ethnic minorities, including migrants, are often at elevated risk. Polluting industries, hazardous waste disposal sites, contaminated drinking water and other sources of toxic exposure are often disproportionately located in minority communities. Minority communities have also been housed on sites contaminated with high levels of lead and other toxic substances and wastes. Such communities are often unable to gain access to effective remedy for toxic pollution and contamination.

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[44] See www.who.int/mediacentre/news/releases/2016/deaths-attributable-to-unhealthy-environments/en/.

[45] United Nations Declaration on the Rights of Indigenous Peoples, art. 29 (1).

[46] Ibid., art. 29 (3).

Post-conflict communities

44. Existing laws intended to protect the environment during armed conflict have proven insufficient to prevent serious pollution and other forms of exposure to hazardous substances. Communities in and around conflict zones continue to face substantial legacies of toxic exposure. Furthermore, issues regarding weapons testing, contamination from military bases and other conflict-related sources of pollution and contamination are repeatedly raised by local communities suffering adverse impacts or lacking necessary information. In many cases, such communities are unable to secure an effective remedy.

C. Adopt fundamental approaches

45. Three approaches, described below, have been identified by the international community as being crucial for States to follow in order to avoid adverse impacts related to hazardous substances in products and business activities, particularly on the most vulnerable.

Inherently safer design

46. The best protection of the enjoyment of human rights against the impact of toxics is through prevention of exposure. For example, preventing exposure protects the rights to life, to health, to physical integrity, to dignity and to equality, and averts the difficulty of securing the right of victims to an effective remedy for harm that appears years or decades after exposure.

47. Good practices for the prevention of exposure are already well known. In the hierarchy of hazard controls, or "inherently safer design", the best practice is the elimination of hazards. This is followed by risk mitigation options such as substitution with less hazardous substances and materials, engineering controls, administrative controls and the use of personal protective equipment, in order of most to least effective.[47] Elimination and substitution of hazardous substances is necessary to protect human rights throughout the life cycle of industrial products and processes, to reduce hazardous waste generation, and to enable the best transition to a healthy circular economy. Paying greater attention to elimination and substitution would contribute significantly to alleviating the disproportionate impacts on vulnerable groups.

Life-cycle approach

48. States should take a life-cycle approach to the extraction, production, use, release and disposal of toxics. This may facilitate links between the economic, social and environmental dimensions of business operations throughout the value chain. Such an approach is essential to reducing the toxic footprint of consumption and production and protecting vulnerable groups throughout the life cycles of products, and a key element in ensuring sustainable development.

49. A life-cycle approach takes into account the adverse impacts of a product over its entire life cycle, going beyond a narrow focus on an enterprise's production facilities and processes. A product's life cycle begins with the extraction of raw materials, and includes the energy requirements of that extraction. Materials and energy are then an intrinsic part of production, packaging, distribution, use and maintenance, and eventually recycling, reuse, recovery or final disposal. At each life-cycle stage there is the potential to prevent toxic exposure by ensuring better design and by reducing raw material inputs, hazardous substances in the product, and the toxicity and volume of waste requiring disposal.

Global approach

50. States cannot reasonably expect to respect, protect and fulfil human rights implicated by toxics without a global approach. The issues presented by hazardous

[47] See www.cdc.gov/niosh/topics/hierarchy/.

substances are far too international — involving global supply chains, transnational corporations, foreign investment and transboundary movement of pollution and waste — to be effectively addressed through a nationalistic approach.

51. At present, the issue is predominantly regulated at the global level through a patchwork of treaties for specific issues or chemicals of concern, which leave enormous gaps. A strong and robust global approach to the life cycle of toxics is necessary for the realization of human rights.

52. Certain elements have proven important with respect to increasing the efficiency and effectiveness of treaties. These include: participatory processes; flexibility in developing stronger controls as scientific evidence of threats and impacts develop; trade-related incentives; appropriate timelines for reductions in and elimination of use; independent panels for technology assessments; non-consensus decision-making; compliance mechanisms to ensure accountability; access to adequate financial and other resources to support low-income countries; and transfer of technology.

53. However, provisions for many of the above-mentioned aspects are lacking in current treaties for toxic chemicals and wastes, which hampers the effectiveness and efficiency of the implementation of those treaties. The main concerns are the lack of effective compliance mechanisms and the inadequacy of financial resources and decision-making processes, which impede action at the global level. Regarding occupational safety and health, very few countries have ratified key, albeit outdated, ILO conventions. Among those who have, many are not adequately implementing or enforcing the obligations contained therein.

54. Furthermore, the narrow scope of existing treaties remains a major concern in terms of responding effectively and efficiently to increasing evidence of what in fact constitutes a chemical of global concern. Existing treaties employ an outdated and exceedingly narrow definition of what constitutes a chemical of global concern, the most restrictive criteria being that the substance must travel significant distances via wind and water. Therefore, existing multilateral environmental agreements provide global standards for the production and use of only a few dozen hazardous substances, out of several thousand that are part of today's global economies and are of global concern.

55. Without strong global standards, there will continue to be a significant risk that the most vulnerable people, particularly those in lower-income countries, will become victims of toxic exposure. Global supply chains and trade flows require a different definition of what constitutes a chemical of global concern and a global regime that reflects modern reality.

D. Enact and enforce legislation

56. States must establish legislative and regulatory frameworks to protect human rights from infringement as a result of toxic chemicals and wastes. The failure to enact or enforce laws necessary to prevent the adverse impacts of hazardous substances on, inter alia, the rights to life, to health and to the integrity of the person is a violation of a State's obligations.[48] A life-cycle approach to such frameworks is necessary. States must take steps to effectively regulate the foreign conduct of businesses domiciled or headquartered in their territory in order to protect human rights in other States.[49]

Uphold human rights through national laws

57. States must uphold human rights through legislation to protect them from infringement resulting from toxic working conditions, unsafe consumer products, pollution, contamination and waste. Many States have established constitutional rights and legislation of direct relevance to toxics. Legislation in place covers particular life-cycle stages,

[48] See, for example, Committee on Economic, Social and Cultural Rights, general comment No. 14, para. 51. See also Committee on the Rights of the Child, general comment No. 16.

[49] See, for example, CCPR/C/DEU/CO/6 and CRC/C/CAN/CO/3-4.

different types of substances, different product categories, information requirements and other aspects relevant to the State's duty to protect.

58. However, there is often a disconnect between the standards of protection actually required to uphold human rights and the standards of protection that are established under legislation. There is a need in all countries to better ensure that laws and policies on toxics reflect the State's human rights obligations. This is particularly apparent in view of the inequalities and denial of dignity faced by many of the vulnerable groups described above. The excessive emphasis placed by States on risk to the overall population leaves the most vulnerable suffering disproportionately from toxic exposure.

59. Of significant concern is the number of States that consistently reference their compliance with the narrow patchwork of global treaties for hazardous substances and wastes as evidence that they uphold human rights in that area. As discussed above, existing treaties do not have the appropriate scope to justify such an assertion.

Non-regression and progressive realization

60. Under the principle of non-regression, States must not reduce human rights protection in the area of toxics unless there is strong justification for a retrogressive measure.[50]

61. Furthermore, States must continuously improve the protection of rights against the impacts of toxics, including by compelling businesses to develop safer, healthier products and processes.[51] States must elevate legal standards of protection as "expeditiously and effectively as possible"[52] to protect the right to health, and take "all possible measures to reduce infant mortality and to increase life expectancy".[53] States must have systems in place to generate data to inform themselves of the progress necessary, and report publicly on that progress and challenges. The fact that progressive realization is foreseen for certain rights implicated by toxics "should not be misinterpreted as depriving the obligation of all meaningful content".[54]

Secure compliance and ensure enforcement

62. States must enforce legislation intended to protect human rights implicated by toxics.[55] Effective compliance and enforcement often requires strong mechanisms to ensure cooperation and coordination among public prosecutors and regulatory, inspection and customs officials. Without compliance and enforcement, legislation can be devoid of meaning. Compliance and enforcement are mutually supported by monitoring, empowerment of rights holders, criminal penalties, coordination, and the securing of financial resources, as discussed below.

Leverage financial, human and technical resources for implementation

63. States must fulfil human rights through adequate allocations of budgetary and other resources. The lack of financial and technical resources is often cited as a primary challenge in protecting human rights implicated by toxics. This in part is due to a misperception by States that the cost of action is either unaffordable or greater than the cost of inaction.

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[50] Universal Declaration of Human Rights, art. 30; International Covenant on Civil and Political Rights, art. 5; International Covenant on Economic, Social and Cultural Rights, art. 5; Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights), arts. 17 and 53.

[51] Under the International Covenant on Economic, Social and Cultural Rights, States have a duty to improve all aspects of environmental and industrial hygiene and to prevent, treat and control endemic, occupational and other diseases (art. 12).

[52] Committee on Economic, Social and Cultural Rights, general comment No. 3.

[53] Human Rights Committee, general comment No. 6.

[54] Committee on Economic, Social and Cultural Rights, general comment No. 3, para. 9.

[55] See, for example, Committee on Economic, Social and Cultural Rights, general comment No. 14, para. 51. See also Committee on the Rights of the Child, general comment No. 16.

64. The cost to public resources and individuals of failing to restrict and ban hazardous substances can be staggering, and can impede efforts to lift people out of poverty and make meaningful progress on development.[56] The economic benefits of stronger measures to protect health against the effects of toxic pollution and contamination have been shown in several instances to be greater than the cost of implementing such measures.

65. Recent initiatives have highlighted the utility of cost-recovery mechanisms in helping government regulators to ensure appropriate health and environmental protection. In this way, the costs of monitoring and inspection, of technical capacity for risk assessments and of other necessary regulatory and enforcement activities can be defrayed. In cases where safer alternatives are unavailable or inaccessible, the internalization of the public health costs within businesses implicated can help incentivize the development and adoption of safer products and processes. In 2015, the United Nations Environment Programme (UNEP) published guidance to support States in establishing measures to finance necessary administration activities in the management of toxic chemical products, which has been tested in four countries.[57]

66. International cooperation, including financial and technical assistance, has also been provided to assist low-income countries in developing the capacities needed to protect human rights implicated by toxic chemicals. International policy frameworks have also encouraged the mainstreaming of the management of toxic chemical and waste in development strategies to help unlock resources.[58]

E. Create effective institutions

Translate evidence into action

67. States must translate evidence of potential impacts on the enjoyment of human rights into timely and effective measures to respect, protect and fulfil each right implicated. The ability to protect the human rights to life and to health and to realize the right to access to the benefits of scientific progress and its applications hinges upon the ability to translate evidence into protective laws and policies. As discussed above, States must make expeditious progress in the realization of the rights to life and to health, taking all possible measures to protect those rights.

68. However, despite evidence of risks and impacts, there have been instances where the procedures of some States have enabled private interests to use scientific uncertainties as a basis for delaying action to reduce risks. This has led to extreme delays, some lasting decades, in translating evidence of hazard and risk into measures necessary to protect workers, children and others most at risk.[59] This is an unfortunate exploitation of scientific uncertainty by private interests. Scientific uncertainty will always exist. Several States have adopted the principle of precaution to help ensure that action is taken despite those uncertainties.[60] The principle of precaution is essential to the progressive realization of numerous human rights implicated by hazardous substances and wastes.

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[56] UNEP, *Costs of Inaction on the Sound Management of Chemicals* (2013). Available at www.unep.org/chemicalsandwaste/what-we-do/policy-and-governance/reports-and-publications/costs-inaction-initiative.

[57] UNEP Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for Sound Management of Chemicals, available at www.unep.org/chemicalsandwaste/what-we-do/policy-and-governance/reports-and-publications/lra-guidance.

[58] For example, the Strategic Approach to International Chemicals Management, in particular the overall orientation and guidance for achieving the 2020 goal of sound management of chemicals (SAICM/ICCM.4/6).

[59] See, for example, Jennifer Sass and Daniel Rosenberg, *The Delay Game: How the Chemical Industry Ducks Regulation of the Most Toxic Substances* (Natural Resources Defense Council, 2011).

[60] See, for example, the Rio Declaration on Environment and Development, principle 15, and the Treaty of Lisbon, art. 191.

Employ a whole-of-government approach

69. Protecting human rights against the effects of toxics almost invariably implicates numerous divisions of national Governments. This necessitates coordination and cooperation among the ministries responsible for environment, health, labour, energy, food, agriculture, economy, trade and justice and others. States must use a whole-of-government approach to the threat of toxic exposure to ensure that all relevant ministries and agencies effectively respect, protect and fulfil the human rights that are implicated.

70. Such coordination and cooperation remains a major challenge in all States, where in particular health, labour and justice ministries are often not sufficiently engaged, and related activities are fragmented across a myriad of underresourced agencies and ministries. Of significant concern is the limited engagement by authorities specifically responsible for human rights, including independent national human rights institutions, with regard to the problem of toxic exposure.

Prevent conflicts of interest

71. States need information in order to conduct the assessments of hazards and risks required to ensure that measures for protection are in place before adverse impacts manifest, and in order to realize the right to an effective remedy. Indispensable in this regard is the integrity of the information on which States rely. States must ensure the integrity of the evidence-gathering and decision-making processes in order to protect human rights from being infringed by the effects of toxics.

72. Conflicts of interest erode the integrity and credibility of institutions upon which States rely to protect against infringements of human rights resulting from hazardous substances; such conflicts sometimes even enable human rights abuses to start or continue.

73. States and international bodies must prevent not only actual conflicts of interest but also the appearance of such conflicts. For example, in declaration of interests forms for experts, WHO has referred to both "apparent" and "potential" conflicts of interest. Recent controversies have illustrated the importance of maximum transparency in appraisals of apparent or potential conflicts of interest.

74. The integrity of information relied upon by Governments must be beyond reproach. The reliance of regulators on industry-funded studies, the exclusion of independent science from assessments and the confidentiality of studies relied upon by authorities to reach conclusions are some of the concerns raised in this area. States should develop systems to reduce public concerns about the integrity of information and the credibility of decisions taken.

75. Concerns also consistently surface about conflicts of interest between the private sector and individuals in public bodies and those charged with reviewing the safety of hazardous substances to which people are regularly exposed. The "revolving door" between industry and government is frequently noted with concern.[41]

F. Enable people to claim and defend their rights

76. In order for human rights obligations to be met and the objective of sustainable development to be achieved, rights holders must be involved. States must enable people and peoples to claim and defend their rights. Empowering rights holders, particularly those most at risk, to defend their rights helps States meet their obligations under human rights law and uphold principles of accountability, democracy and rule of law.

77. The ability of rights holders to exercise and defend their rights is fundamental to the enjoyment of human rights and is at the core of rights-based environmental agreements such as the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention). Ensuring enjoyment

[41] See, for example, A/HRC/34/48, para. 87.

of the fundamental rights to freedom of expression, of assembly and of association is essential in enabling right holders to protect themselves, their families and their community from rights abuses linked to toxic chemicals, pollution, contamination and waste.

78. There is a widely recognized crisis facing environmental human rights defenders. Many such individuals are defending rights in the context of toxic threats from extractive industries or industrial pollution. The Special Rapporteur on the situation of human rights defenders has identified, and outlined seven principles that should underpin, good practices in the protection of human rights defenders, which could help empower defenders to know and claim their rights.[62]

79. Human rights defenders help to secure justice on behalf of victims and to break patterns of impunity, thereby helping to prevent future violations. Scientists are human rights defenders. They are at the vanguard of protecting human rights from the abuses tied to thousands of different hazardous substances, from greenhouse gases to pollutants that impair the health and well-being of children. Scientists have served as whistle-blowers, exposing the dangers of hazardous substances in the hope of preventing future violations.

80. Today, scientists who illustrate the impacts of hazardous substances on human health are often under attack in the form of threats to their livelihood, through funding cuts, or to their reputation. In some cases the attacks appear to be in response to increased efforts to clarify the threat posed by certain chemicals to children's health.

III. Responsibilities of businesses

81. Businesses have a responsibility to respect the human rights that are implicated by their activities, supply chains, products, policies, procedures and business relationships, including their investments. Virtually all businesses bear some responsibility. The toxic footprint of businesses individually and collectively across numerous sectors is resulting in human rights abuses, particularly for vulnerable groups. These impacts stand to increase along with current projections for increased production and use of toxic chemicals, barring strong action by States to better protect human rights from the threats they pose.

82. Fundamental to this responsibility is human rights due diligence in the area of toxic chemicals, pollution and waste. Businesses need to conduct such due diligence on toxics produced, used, released, stored and disposed of in the course of their activities, the life cycle of their products and their business relationships. Good examples do exist of companies reducing their toxic footprint or striving to respect human rights. While efforts to link human rights and the reduction of toxics within businesses are limited, examples exist and continue to be developed.

A. Identify and assess impacts

83. Businesses should identify and assess the actual and potential adverse human rights impacts in which they may be involved either through their own activities or as a result of their business relationships.[63] They should identify actual and potential impacts throughout the life cycle of their products, including supply and value chains. Traceability of supply chains and the life cycle of products is essential to identifying human rights abuses linked to the exposure of workers and communities to toxics.

84. This requires businesses to go beyond mere compliance with existing legislation and regulations. Existing legislation has been, and continues to be, outpaced by the rapid expansion and evolution of key industrial sectors, such as extractive and chemical industries, and innovation in new products and processes downstream. Legislation lags farther and farther behind the evidence of hazards, risks and impacts of hazardous substances and wastes. The rapid expansion of extractive and chemical industries in low-

[62] A/HRC/31/55.

[63] See principle 18 of the Guiding Principles on Business and Human Rights.

income countries has outstripped the capacity of government regulators, creating governance gaps and heightened possibilities of impacts.

B. Prevent and mitigate impacts

85. Businesses must actively seek to prevent the impacts of hazardous substances on the enjoyment of human rights. Prevention of impacts is best achieved through the elimination and substitution of the hazardous substances that are extracted, produced, manufactured, used, released or disposed of in the course of business activities.

86. When a means of elimination and substitution of toxics is not yet available, companies should mitigate exposure to toxic chemicals and the release of pollution to the best of their abilities. Consumers, communities and others who may be affected should be apprised of the risks. In instances where new information of hazards in products comes to light or environmental contamination results that requires remediation, businesses have a responsibility to prevent and mitigate impacts as quickly as possible, even if the State has not yet given orders to do so.

C. Account for efforts to address impacts on human rights

87. Businesses, including those that use, produce, release and dispose of hazardous substances, have a responsibility to publicly communicate information about the risks created by their activities and how they mitigate and address both actual and potential human rights impacts in which they might be involved.[64]

88. There is a shared responsibility among businesses that supply and use hazardous substances to communicate information to determine risks and prevent harm.[65] Companies throughout the chain of commerce should be responsible for providing the information, such as hazard, use and exposure information, necessary to assess the human rights risks posed by substances and materials.[66]

D. Key sectors

Extractive and power industries

89. Extractive industries have a long and ongoing history of impacts on human rights.[67] The products extracted, the tailings, leachate and other waste materials, the substances used in processing and the by-products of energy production can all be hazardous and give rise to human rights abuses. Numerous business sectors discussed below have supply chains, investments and other relationships that require detailed attention in their own due diligence processes in determining whether their supply chains can be tied to human rights abuses in extractive industries.

Chemical industry

90. Manufacturers of industrial chemicals, pesticides, pharmaceuticals and other chemical products have been responsible for human rights abuses resulting from the toxicity of their products, from unsafe conditions at facilities or from the inevitable pollution, contamination and waste produced by their products. Human rights due diligence must include the potential risk of abuse following the sale of toxic chemicals and pesticides, as well as the raw materials used for their production and the conditions at manufacturing facilities. Manufacturers have a responsibility to engage in continuous efforts to identify the

[64] See principle 21 of the Guiding Principles on Business and Human Rights.
[65] See, for example, the Chemicals Convention, 1990 (No. 170) of ILO.
[66] American Chemistry Council, "10 principles for modernizing TSCA" (2009).
[67] See A/HRC/21/48.

hazards and risks of their chemical products and to prevent impacts, including through the development of safer alternatives.

Food and agriculture

91. In addition to the pesticide manufacturers discussed above, downstream businesses are implicated in the value chain of food and agricultural production in which such hazardous substances are used. For example, according to UNICEF, "exposure to toxic chemicals is likely to be the single greatest health risk to pregnant and nursing workers in the palm oil sector".[88] Approximately 50 per cent of all consumer products around the world use palm oil, implicating large numbers of consumer product companies.[89] Air pollution resulting in haze is also of grave concern to children, women and older persons. Illnesses related to haze resulting from the clearing of forests and peat lands for palm plantations not only affect workers and communities near plantations, but can have transboundary impacts. Although the burning of forests and the use of certain pesticides are illegal, compliance and enforcement is poor and such practices continue. Other food and agriculture sectors that face challenges in preventing human rights abuses include coffee, cocoa, cotton and tobacco production.

Manufacturing sector and consumer products

92. Hazardous substances continue to be used in the manufacturing sector and as components of a variety of consumer products, implicating the rights of workers, local communities and consumers, as well as the rights of those who may be exposed to post-consumer waste.

93. Concerns about human rights abuses linked to toxic chemicals have been raised in the context of the electronics sector and the textile, leather and other garment industries. Researchers have also identified a myriad of adverse health impacts linked to toxic chemicals in cosmetics, personal care products, cleaning products, detergents and other household consumer products.

Retail sector

94. Retailers are able to demand compliance with human rights from their suppliers upstream to ensure that no community, consumer or worker suffers abuses due to hazardous substances linked to products they sell. Indeed, in response to consumer demands for products free of toxic chemicals and for ethical conduct by businesses, certain retailers are exceeding the standards provided by national and international laws. For example, retailers have prohibited the inclusion of certain chemicals of concern in their products.

Financial sector

95. The financial sector, including both investors and insurers, has the power to incentivize the companies to better respect human rights through a transition away from toxic practices. However, investments and insurance policies can also facilitate human rights abuses. For example, demand for investments in gold are believed to have contributed to an increased use of mercury for artisanal and small-scale gold mining, calculated to be the largest source of mercury emissions into the global environment[90] and the cause of birth defects and other health impacts among children in mining communities. Responsible investment initiatives should link human rights criteria with criteria on toxic chemicals, pollution and other such metrics.

[88] UNICEF, "Palm oil and children in Indonesia" (2016), p. 7. Available at www.unicef.org/indonesia/Palm_Oil_and_Children_in_Indonesia.pdf.

[89] See www.unicef.org/eu/palm-oil.html.

[90] UNEP, *Global Mercury Assessment 2013: Sources, Emissions, Releases and Environmental Transport*.

IV. Access to justice and remedy

96. Access to justice is an essential component of the rule of law and a means by which victims of toxics can actively claim the entire range of rights they hold, including access to an effective remedy. Human rights obligations in the area of toxics must be matched to appropriate and effective remedies when breached.[71] An effective system of justice and remedy helps to prevent future abuses and ensure responsible business conduct. States must ensure that victims of toxics have access to justice and effective remedies.[72]

A. Effective remedy

97. Effective remedies for violations of human rights law include the right of victims to have access to relevant information concerning violations and to effective and prompt reparation for harm suffered.[73] Reparations can involve restitution, compensation, rehabilitation, satisfaction, guarantees of non-repetition, including changes in relevant laws and practices, as well as bringing to justice the perpetrators of rights violations.[74]

98. Extrapolating from these principles, the right to an effective remedy requires, inter alia, the remediation of contaminated sites, compensation, the cessation of action or inaction that gives rise to impacts, the provision of health care and the dissemination of information to prevent recurrence.[75] Timely reparation to prevent recurrence is essential.[76] Moreover, the application must be without any discrimination of any kind or on any ground, including age.[77] To be effective, remedies should be appropriately adapted for vulnerable groups, such as children, taking into account their special needs, risks and evolving development and capacities.[78]

99. Independent assessments have identified hundreds of thousands of contaminated sites around the world. Sites can become contaminated for any number of reasons, including as a result of conflict and industrial operations. Left unaddressed, contaminated sites are a continuing threat to the rights, including the rights to life and to health, of present and future generations.

100. States struggle to remediate sites, many of which have been known to authorities for decades. Businesses responsible for the contamination can be unidentifiable, may no longer exist or may simply refuse to be accountable for the ongoing risks their activities pose to the enjoyment of human rights. In some cases, informal sector activities are responsible for a legacy of contamination. States must identify and remediate contaminated sites, and take measures to mitigate the adverse impacts of toxic contamination until remediation is complete.

101. Victims have a right to fair compensation for losses suffered. Compensation can address material losses and non-material or moral suffering. States have a duty to provide health care, including treatment and medicines, to address adverse impacts as needed.

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[71] See, for example, the International Covenant on Civil and Political Rights, art. 2. See also the Guiding Principles on Business and Human Rights, principles 22, 25 and 26, and the Rio Declaration on Environment and Development, principle 10.

[72] See E/CN.4/2006/42, para. 45.

[73] Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law, para. 11.

[74] Ibid., paras. 15-23. See also Human Rights Committee, general comment No. 31 (2004) on the nature of the general legal obligation imposed on States parties to the Covenant, para. 16, and Convention on the Rights of the Child, art. 39.

[75] See A/HRC/33/41, para. 40.

[76] Committee on the Rights of the Child, general comment No. 16, para. 31.

[77] Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law, para. 25.

[78] See Human Rights Committee, general comment No. 31, para. 15; see also Committee on the Rights of the Child, general comment No. 16, para. 31.

102. States have the primary obligation to ensure timely remedy for victims, but must also ensure that in time the businesses responsible for rights abuses are held accountable, including through restitution for all costs incurred in realizing an effective remedy for victims. In the context of transnational business activities, international cooperation is often essential to help ensure that victims have timely access to an effective remedy.

103. It is essential that as part of an effective remedy States take measures to avoid recurrence of the type of violation in question, which may require changes in the State's laws or practices regarding toxics.[79] States have strengthened information requirements and enforcement actions and phased out toxic chemicals of concern, among other measures, to avoid recurrence. However, States must not wait until risks materialize as harm to progressively strengthen protections.

104. States must ensure that perpetrators of human rights violations related to toxics can be brought to justice and held criminally liable. In recent years there has been an increase in illegal and criminal activities surrounding the sale, use, emission and disposal of toxic chemicals, pesticides and wastes.[80] These activities coincide with a range of criminal acts, including money laundering, fraud and racketeering.

B. Obstacles to remedy

105. Everyone has the right to equal and effective access to justice and remedy. In practice, however, elements of discrimination and other challenges remain when victims who are most vulnerable to toxic exposures seek justice. Some of the specific challenges that must be addressed to ensure access to justice and an effective remedy in the context of toxics are discussed below.

Causation and the burden of proof

106. The burden placed upon victims to prove a causal link between health impacts that take years or decades to manifest and potential exposure to thousands of different substances with known and unknown hazardous properties, through any number of exposure routes, can be an insurmountable obstacle. This is often because information on intrinsic hazards and exposures is either not available or not accessible, and is complicated by the vast number of potential diffuse sources of exposure, periods of heightened sensitivity during a lifetime, the latency of visible impacts and other factors. Placing the burden on victims of the effects of toxic chemicals to prove the cause of their illness, rather than on businesses with access to and control of relevant information and the power to generate it when it is missing, can be a grave injustice. States should further explore options to better balance the right of victims to justice and remedy. Greater accountability can help to incentivize the development and adoption of safer alternatives that carry less risk of human rights abuses.

Costs

107. Access to justice requires that procedures not be prohibitively expensive.[81] In general, but particularly for low-income communities who are disproportionately affected by toxic exposure, the expense of legal proceedings can obstruct access to justice and remedy. The complex legal cases for alleged injuries resulting from toxics can incur prohibitively expensive legal fees. In addition to attorney fees, other related costs may be incurred, such as court fees, fees to pay for scientific experts and transportation, and lost pay. The obligation of an unsuccessful claimant to pay the legal expenses of other parties can also prevent access to justice and remedy. States must ensure that access to justice and remedy for the impacts of toxics is not prohibitively expensive.

[79] See, for example, Human Rights Committee, general comment No. 31, para. 17.

[80] See www.unep.org/newscentre/unep-interpol-report-value-environmental-crime-26.

[81] See, for example, the Aarhus Convention, art. 9.

Transnational claims, corporate structures and acquisitions

108. The impacts of businesses often manifest in countries other than those in which decisions are made or where financial resources for remedies are available. In some countries, the lack of an independent judiciary, undue influence on regulatory decisions and other factors can make claims difficult to pursue. States must ensure that corporations in their territory are accountable for abuses abroad, including by enabling foreign victims to bring claims for abuses.

109. Corporate structures, for example parent-subsidiary relationships, have prevented access to justice and remedy. Despite recognition that parent companies influence conduct within the corporate group, victims of corporate human rights abuses linked to toxic exposure can be left without justice or remedy because courts are reluctant to pierce the corporate veil. Furthermore, the acquisition of assets without the transfer of liabilities can deprive victims of the resources necessary to secure an effective remedy. States must ensure that corporate structures and acquisitions do not prevent victims from accessing justice or remedy for human rights abuses linked to toxic exposure.

Conflict

110. The lack of transparency demonstrated by States regarding the pollution caused by their actions during conflict can impede the identification of contaminated sites, and thus limit access of affected communities to preventative health care, information on how to reduce risks and other protective measures. Moreover, States recovering from conflict often lack technical assistance and funding to remediate toxic remnants of war, leading to further harm post-conflict. Communities affected by military bases and testing of weapons often do not have access to the classified information necessary to ensure an effective remedy for victims of the resulting contamination.

V. Conclusions and recommendations

111. **Over the past several decades, many States have made welcome progress in reducing the impacts of toxics. However, this progress has not been shared equally. There remain disparities within and among countries of all income levels in respecting, protecting and fulfilling human rights implicated by toxics. The disparity between high-income countries and low- to middle-income countries is serious.**

112. **The above guidelines for good practices are intended to assist States in ensuring that their laws and other practices are in line with their human rights obligations. In this vein, the Special Rapporteur recommends that States and other stakeholders apply the following principles:**

(a) **States must ensure that legislation and other practices reflect their duty to respect, protect and fulfil human rights obligations implicated by hazardous substances and wastes, including the rights to life, to health and to physical integrity;**

(b) **States must ensure that their practices relating to hazardous substances and wastes ensure equality, do not discriminate against any vulnerable group, including children, the poor, workers, persons with disabilities, older persons, indigenous peoples, migrants and minorities, and take into account gender-specific risks;**

(c) **States should use inherently safer design, implement a life-cycle approach to protect the most vulnerable from hazardous substances and wastes and should, with urgency, apply a global approach;**

(d) **States must enact and enforce legislative and regulatory frameworks to protect human rights against infringement caused by business operations that produce, use, release, store and dispose of hazardous substances and wastes, including the foreign operations of businesses based in their territory; States must not lower standards of protection and must continuously improve protections; to fulfil their obligations, States should explore cost-recovery systems;**

(e) States must establish effective institutions capable of taking timely action to protect human rights; States must prevent conflicts of interest and should implement a whole-of-government approach;

(f) States must enable people and peoples to claim and defend their rights against the threats of toxic and otherwise hazardous substances and wastes;

(g) Businesses should conduct human rights due diligence for the life cycle of toxics in their products and their operations, including supply and value chains, and should identify and assess risks, prevent and mitigate impacts, and be transparent and accountable regarding their efforts; States, as part of their duty to protect, should compel businesses to conduct and publicly disclose such due diligence;

(h) States must ensure that victims of the effects of hazardous substances and wastes have access to an effective remedy, including remediation, health care, compensation and a guarantee of non-repetition, among others, and must reduce systemic obstacles, including the burden of proof and causation, among others, that prevent victims of toxic exposure from accessing remedies.